

Section 3. Amendments to the Claims

Please cancel claims 24 and 32 and amend the claims 1-23 and 25-31, as set out below in the listing of claims 1-32 of the application:

1. (Currently amended) ~~Extrusion~~ An extrusion apparatus comprising:
at least one first reservoir ~~(4)~~ connected at a first end to a first opening of a plurality of regulatory modules ~~(4)~~ containing passages ~~(17)~~, through which material ~~(25)~~ is excludable, wherein the extrusion apparatus ~~(4)~~ has at least 1000 ~~passage (17)~~ passages per square meter cross-section.
2. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1, wherein the regulatory module ~~(4)~~ additionally comprises at least one second reservoir.
3. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 2, wherein the second reservoir is fluidly connected to at least an opening in at least one of the passages ~~(17)~~.
4. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above claims~~, further comprising sensors ~~(70)~~.
5. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above claims~~, further comprising at least one sensor selected from the group consisting of the following ~~sensors~~: pressure sensors, temperature sensors, chemical sensors, pH sensors ~~and/or~~ and light-scattering sensors.
6. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above claims~~, wherein at least one of the regulatory modules ~~(4)~~ ~~comprise~~ comprises at least one individual sensor ~~(70)~~.
7. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 4 ~~one of the above claims~~, wherein the sensors are integral to the regulatory modules ~~(4)~~.
8. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above claims~~, wherein the regulatory modules ~~(4)~~ further ~~additionally~~ comprise ~~one or more pumps (2)~~ at least one pump.

9. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above~~
~~claims~~, wherein the regulatory modules (4) further ~~additionally~~ comprise at least one pump
selected from the group consisting of piezo-electric pumps and or vibration pumps (2).
10. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above~~
~~claims~~, wherein the passages comprise tubular passages (17) have having flow inlets.
11. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above~~
~~claims~~, wherein said passages have interior walls ~~the interior wall of the passages (17) are made of~~
comprising a permeable material.
12. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above~~
~~claims~~, wherein the regulatory modules (4) are injection ~~moulded~~ molded.
13. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~one of the above~~
~~claims~~, wherein the regulatory modules (4) are formed by ablation.
14. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any of the above~~
~~claims~~, wherein in operation the material (25) is drawn down at a first distance at least 0.5 mm
from an outer exit opening (13) within the passages ~~passage (17).~~
15. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any one of the~~
~~above claims~~, wherein a component of the material (25) in an initial zone in one of the passages
(17) forms rod-shaped units (64) that are substantially perpendicular to ~~the~~ an internal surface of
the passage (17).
16. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any one of the~~
~~above claims~~, wherein a component of the material (25) in a subsequent zone (62) of one of the
passages (17) has rod-shaped units (64) ~~which~~ that tumble as material (25) flows within the
passage (17).

17. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any one of the above claims~~, further comprising a ridged surface (66) having a plurality of ridges (60) on the an internal surface of the ~~passages~~ passage (17).

18. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 17, wherein the height of the ridges (60) ~~are~~ is less than 10% ~~than the~~ of diameter of the ~~passages~~ passage (17).

19. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 17 ~~one of claims 17 or claim 18~~, wherein the ridged surface (66) has a surface energy lower than ~~the~~ surface energy of the material (25).

20. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 17 ~~one of the claims 17 to 19~~, wherein the passages are tubular passages, and the ridges (60) are substantially oriented along a long axis of the tubular ~~passages~~ passage (17).

21. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 17 ~~one of the claims 17 to 20~~, wherein the ridges (60) ~~are made of~~ comprise hydrophobic material.

22. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 17 ~~one of the claims 17 to 20~~, wherein the ridges (60) are coated with hydrophobic material.

23. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 22 ~~one of the claims 17 to 22~~, ~~wherein the~~ constructed and arranged so that draw down of material occurs substantially adjacent to the hydrophobic material coated on the ridges ~~ridged shaped surface coating~~ (66).

24. (Cancelled)

25. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any one of the above claims~~, further comprising cleaning apparatus.

26. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 25, wherein the cleaning apparatus comprises ~~comprised~~ a permeable interior wall in said passages ~~of the passage~~ (17) through which cleaning agents are introduced.

27. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 26, wherein the cleaning agents ~~are~~ comprise alkaline fluids.

28. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 3 ~~one of claims 3 to 27~~, further comprising a microprocessor connected to at least one of the sensors ~~(75) connected to the sensor (70)~~.

29. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 28, wherein the microprocessor ~~(75)~~ has an output for sending signals to regulate at least one parameter of the extrusion apparatus.

30. (Currently amended) ~~Extrusion~~ An extrusion apparatus, according to claim 28 ~~one of claims 28 or 29~~, wherein the microprocessor ~~(75)~~ is integral to the regulatory modules ~~module (4)~~.

31. (Currently amended) ~~Extrusion~~ An extrusion apparatus according to claim 1 ~~any one of the above claims~~, wherein the extrusion apparatus is a spinning apparatus.

32. (Cancelled)